

PAT-NO: JP363027707A

DOCUMENT-IDENTIFIER: JP 63027707 A

TITLE: APPARATUS FOR INSPECTING HYPERBOLIC  
MIRROR

PUBN-DATE: February 5, 1988

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APPL-NO: JP61171221

APPL-DATE: July 21, 1986

INT-CL (IPC): G01B011/24, G01M011/00

ABSTRACT:

PURPOSE: To rapidly measure and evaluate a hyperboloid with high accuracy, by utilizing the geometrical property of the hyperboloid and using a Fizeau type laser interferometer.

CONSTITUTION: The optical axis of a Fizeau type laser interferometer 22 passes a first reflector 15 and a focal position where laser beam is condensed by the reference standard spherical lens 23 of the Fizeau type laser interferometer 22 coincides with the first reflector 15. Since the first

reflector 15 is present at one focal position of a hyperbolic mirror 13 to be measured, the laser beam condensed by the reference standard spherical lens 23 is reflected from the hyperbolic mirror 13 to be measured and condensed to the second focal position present at the position conjugated with the first focus of a hyperboloid. Since a second reflector 18 is present at the second focal position, laser beam is again reflected from the surface of said reflector 18 and further reflected by the hyperbolic mirror 13 to be measured to return to the Fizeau type laser interferometer 22. As mentioned above, by utilizing the geometrical property of the hyperboloid and using the Fizeau type laser interferometer, the shape of the hyperboloid can be evaluated.

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